Acoustic Louvres

A complete range of certified, high performance acoustic louvres to solve a wide range of environmental noise pollution problems

www.iac-acoustics.com

making the world a quieter place
IAC Acoustics
Making the World a Quieter Place

Founded on an unrivalled history of engineering with some of the most pioneering discoveries in the industry, the IAC Acoustics brand is synonymous with technological innovation.

From controlling noise at a power station to tuning the sound in a TV or radio studio, IAC Acoustics has had a positive impact on society and helped to shape what can be achieved to make speech more intelligible, music more enjoyable, reduce the impact of industrial noise and protect people’s sense of hearing.

The continual success of our products and services over the decades has brought the brand a reputation for quality and reliability among customers, whether they are multinational corporations or independent family businesses. This is supported by the expertise and passion of our workforce, the people behind the products, including designers, engineers and industry specialists.

To face the ever increasing noise reduction demands of the future, we will strive to further enhance our ability to reduce excessive noise. We aim to focus on developing tomorrow’s solution today, innovating faster and delivering solutions that meet the requirements of the next generation. In doing so, we will stay true to our key values and founding philosophy to make the world a quieter place.

---

<table>
<thead>
<tr>
<th>Page</th>
<th>Section</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>Acoustic Louvres Overview</td>
</tr>
<tr>
<td>6</td>
<td>Acoustic Louvres Range</td>
</tr>
<tr>
<td>8</td>
<td>Features</td>
</tr>
<tr>
<td>10</td>
<td>Acoustic Louvre Installation</td>
</tr>
<tr>
<td>12</td>
<td>Acoustic Louvres Specifications</td>
</tr>
<tr>
<td>14</td>
<td>- Noishield™ Acoustic Louvre Type R</td>
</tr>
<tr>
<td>15</td>
<td>- Noishield™ Acoustic Louvre Type 2R</td>
</tr>
<tr>
<td>16</td>
<td>- Noishield™ Acoustic Louvre Type LP</td>
</tr>
<tr>
<td>17</td>
<td>- Noishield™ Acoustic Louvre Type 2LP</td>
</tr>
<tr>
<td>18</td>
<td>- Slimshield™ Acoustic Louvre SL-100</td>
</tr>
<tr>
<td>19</td>
<td>- Slimshield™ Acoustic Louvre SL-150</td>
</tr>
<tr>
<td>20</td>
<td>- Slimshield™ Acoustic Louvre SL-300</td>
</tr>
<tr>
<td>21</td>
<td>- Slimshield™ Acoustic Louvre SL-600</td>
</tr>
<tr>
<td>22</td>
<td>Acoustic Louvred Doors</td>
</tr>
<tr>
<td>24</td>
<td>Acoustic Louvres in Harsh Environments</td>
</tr>
<tr>
<td>25</td>
<td>Other IAC Acoustics’ Products &amp; Services</td>
</tr>
<tr>
<td>25</td>
<td>Office Contacts</td>
</tr>
</tbody>
</table>
Acoustic Louvres Overview

IAC Acoustics is a leading global manufacturer of rugged, high performance acoustic louvres and has completed thousands of installations worldwide. Applications include:

- Fresh air intakes for ventilation systems
- Mechanical equipment screens and penthouses
- Noise barriers
- Process air intakes
- Cooling tower inlets / exhausts and screens

IAC Acoustics can provide louvre solutions to combat environmental noise problems in mixed commercial / residential areas, carrying out all relevant noise surveys and acoustic analysis.

IAC Acoustics curved (Noishield™) or linear (Slimshield™) blade louvre styles can be used to match the overall scale and aesthetics of a new building.

Form & Function Together
Our acoustic louvred screens result in a high performance solution to unwanted levels of noise without the need for additional architectural cladding.
Acoustic Louvre Range

Noishield™ - Aerofoil blade
Model R & Model LP: 305mm deep
Model 2R & Model 2LP: 610mm deep

Slimshield™ - Linear Blade
SL-100: 100mm deep
SL-150: 152mm deep
SL-300: 300mm deep
SL-600 (double banked): 600mm deep

### Noishield™ Louvres - Sound Transmission Loss (dB)

<table>
<thead>
<tr>
<th>Octave Band Centre Frequency, Hz</th>
<th>Louvre Depth (mm)</th>
<th>63</th>
<th>125</th>
<th>250</th>
<th>500</th>
<th>1k</th>
<th>2k</th>
<th>4k</th>
<th>8k</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model R</td>
<td>305</td>
<td>5</td>
<td>7</td>
<td>11</td>
<td>12</td>
<td>13</td>
<td>14</td>
<td>12</td>
<td>9</td>
</tr>
<tr>
<td>Model 2R</td>
<td>610</td>
<td>6</td>
<td>12</td>
<td>15</td>
<td>21</td>
<td>24</td>
<td>27</td>
<td>25</td>
<td>20</td>
</tr>
<tr>
<td>Model LP</td>
<td>305</td>
<td>4</td>
<td>5</td>
<td>8</td>
<td>9</td>
<td>12</td>
<td>9</td>
<td>7</td>
<td>6</td>
</tr>
<tr>
<td>Model 2LP</td>
<td>610</td>
<td>5</td>
<td>8</td>
<td>12</td>
<td>16</td>
<td>22</td>
<td>18</td>
<td>15</td>
<td>14</td>
</tr>
</tbody>
</table>

### Slimshield™ Louvres - Sound Transmission Loss (dB)

<table>
<thead>
<tr>
<th>Octave Band Centre Frequency, Hz</th>
<th>Louvre Depth (mm)</th>
<th>63</th>
<th>125</th>
<th>250</th>
<th>500</th>
<th>1k</th>
<th>2k</th>
<th>4k</th>
<th>8k</th>
</tr>
</thead>
<tbody>
<tr>
<td>SL-100</td>
<td>100</td>
<td>5</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>9</td>
<td>13</td>
<td>16</td>
<td>13</td>
</tr>
<tr>
<td>SL-150</td>
<td>150</td>
<td>5</td>
<td>6</td>
<td>8</td>
<td>10</td>
<td>14</td>
<td>18</td>
<td>16</td>
<td>15</td>
</tr>
<tr>
<td>SL-300</td>
<td>300</td>
<td>6</td>
<td>7</td>
<td>10</td>
<td>12</td>
<td>18</td>
<td>18</td>
<td>14</td>
<td>13</td>
</tr>
<tr>
<td>SL-600</td>
<td>600</td>
<td>7</td>
<td>9</td>
<td>12</td>
<td>24</td>
<td>31</td>
<td>33</td>
<td>29</td>
<td>30</td>
</tr>
</tbody>
</table>

Integrated or Standalone
Our acoustic louvres can be used as standalone screens around mechanical plant, or be integrated into walls and building façades.
Product Features

Our acoustic louvres are multi-purpose, permitting air to flow, whilst shielding the environment from unwanted noise.

Both IAC Acoustics Noishield™ and Slimshield™ louvres are available in an array of standard modular sizes, meaning that a wide range of performance requirements can be met. By using our range of acoustic louvres, it overcomes architectural consistency issues, especially where space is limited.

Where access is required, both Noishield™ and Slimshield™ acoustic louvres can be supplied as doorsets, either for inclusion in louvred screens, or as standalone units.

Noishield™ Special Features
- Suitable for use behind architectural louvres (100mm air space is required between faces)
- Bold, curved blade appearance
- A highly economical louvre system

Finishes Available
- Galvanised mild steel
- Aluminium
- Stainless steel
- Polyester Powder Coated (PPC)
- Vinyl coated steel
- Syntha Pulvin
- Wood effect painted finish

Slimshield™ Special Features
- Linear appearance
- Superior high frequency performance

Available in a variety of durable, attractive finishes, e.g. vinyl coated steel, polyester powder paint, mill finish aluminium, anodised aluminium, Syntha Pulvin, galvanised and stainless steel

Other non-standard finishes are available upon request.

Bird guards are available in galvanised or stainless steel, insect screens can also be supplied
Engineered for Performance

Despite primarily being engineered as a high performance solution to attenuating unwanted noise, our acoustic louvres are a modular design, resulting in screens that are scalable to suit individual projects.

Typical details are shown below and certified dimension drawings are provided with each louvre. IAC Acoustics will supply all supporting steelwork if necessary. For large louvre banks, IAC Acoustics will provide installation drawings and a full installation service if required.
Acoustic Louvre Specifications

Page

14  Noishield™ Acoustic Louvre Type R
15  Noishield™ Acoustic Louvre Type 2R
16  Noishield™ Acoustic Louvre Type LP
17  Noishield™ Acoustic Louvre Type 2LP
18  Slimshield™ Acoustic Louvre SL-100
19  Slimshield™ Acoustic Louvre SL-150
20  Slimshield™ Acoustic Louvre SL-300
21  Slimshield™ Acoustic Louvre SL-600
Model R  Noishield™ Acoustic Louvres

Acoustic Performance

Octave Band Centre Frequency (Hz)  |  63  |  125 |  250 |  500 |  1k  |  2k  |  4k  |  8k  
--- | --- | --- | --- | --- | --- | --- | --- | --- 
Transmission Loss (dB)  |  5   |  7   |  11  |  12  |  13  |  14  |  12  |  9   
Acoustic Rating  |  R,14dB / D,21dB  

Aerodynamic Performance

Static Pressure Drop [N/m²]  |  10  |  20  |  30  |  40  |  50  |  60  |  70  |  80  |  90  |  100 
--- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- 
Face Velocity (m/s)  |  0.98 |  1.39 |  1.71 |  1.95 |  2.18 |  2.39 |  2.60 |  2.75 |  2.93 |  3.10 
Nominal Free Area  |  43%*  
Aerodynamic Coefficient  |  17.53k  

Acoustic Louvred Doors

- Single and double doors are available in the R louvre range.
- See page 22 for further details.

Model 2R  Noishield™ Acoustic Louvres

Acoustic Performance

Octave Band Centre Frequency (Hz)  |  63  |  125 |  250 |  500 |  1k  |  2k  |  4k  |  8k  
--- | --- | --- | --- | --- | --- | --- | --- | --- 
Transmission Loss (dB)  |  6   |  12  |  15  |  21  |  24  |  27  |  25  |  20  
Acoustic Rating  |  R,24dB / D,31dB  

Aerodynamic Performance

Static Pressure Drop [N/m²]  |  10  |  20  |  30  |  40  |  50  |  60  |  70  |  80  |  90  |  100 
--- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- 
Face Velocity (m/s)  |  0.70 |  1.07 |  1.21 |  1.39 |  1.65 |  1.68 |  1.79 |  1.89 |  2.01 |  2.13 
Nominal Free Area  |  43%*  
Aerodynamic Coefficient  |  34.48k  

Acoustic Louvred Doors

- Single and double doors are available in the 2R louvre range.

See page 22 for further details.
**Model LP**  
Noishield™ Acoustic Louvres

**Acoustic Performance**

<table>
<thead>
<tr>
<th>Octave Band Centre Frequency (Hz)</th>
<th>63</th>
<th>125</th>
<th>250</th>
<th>500</th>
<th>1k</th>
<th>2k</th>
<th>4k</th>
<th>8k</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transmission Loss (dB)</td>
<td>4</td>
<td>5</td>
<td>8</td>
<td>9</td>
<td>12</td>
<td>9</td>
<td>7</td>
<td>6</td>
</tr>
<tr>
<td>Acoustic Rating</td>
<td>R_L11dB / Dp18dB</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Aerodynamic Performance**

<table>
<thead>
<tr>
<th>Static Pressure Drop (N/m²)</th>
<th>10</th>
<th>20</th>
<th>30</th>
<th>40</th>
<th>50</th>
<th>60</th>
<th>70</th>
<th>80</th>
<th>90</th>
<th>100</th>
</tr>
</thead>
<tbody>
<tr>
<td>Face Velocity (m/s)</td>
<td>1.23</td>
<td>1.73</td>
<td>2.11</td>
<td>2.46</td>
<td>2.74</td>
<td>3.00</td>
<td>3.24</td>
<td>3.46</td>
<td>3.65</td>
<td>3.86</td>
</tr>
</tbody>
</table>

*Nominal Free Area: 52%*  
*Average over louvre depth*

| Aerodynamic Coefficient         | 11.10k |

**Acoustic Louved Doors**

- Single and double doors are available in the LP louver range.
- See page 22 for further details

---

**Model 2LP**  
Noishield™ Acoustic Louvres

**Acoustic Performance**

<table>
<thead>
<tr>
<th>Octave Band Centre Frequency (Hz)</th>
<th>63</th>
<th>125</th>
<th>250</th>
<th>500</th>
<th>1k</th>
<th>2k</th>
<th>4k</th>
<th>8k</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transmission Loss (dB)</td>
<td>5</td>
<td>8</td>
<td>12</td>
<td>14</td>
<td>16</td>
<td>18</td>
<td>15</td>
<td>14</td>
</tr>
<tr>
<td>Acoustic Rating</td>
<td>R_L19dB / Dp25dB</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Aerodynamic Performance**

<table>
<thead>
<tr>
<th>Static Pressure Drop (N/m²)</th>
<th>10</th>
<th>20</th>
<th>30</th>
<th>40</th>
<th>50</th>
<th>60</th>
<th>70</th>
<th>80</th>
<th>90</th>
<th>100</th>
</tr>
</thead>
<tbody>
<tr>
<td>Face Velocity (m/s)</td>
<td>1.07</td>
<td>1.41</td>
<td>1.73</td>
<td>1.99</td>
<td>2.21</td>
<td>2.46</td>
<td>2.67</td>
<td>2.77</td>
<td>2.99</td>
<td>3.12</td>
</tr>
</tbody>
</table>

*Nominal Free Area: 52%*  
*Average over louvre depth*

| Aerodynamic Coefficient         | 17.04k |

---

**www.iac-acoustics.com**
SL-100 Slimshield™ Acoustic Louvres

Aerodynamic Performance

<table>
<thead>
<tr>
<th>Octave Band Centre Frequency (Hz)</th>
<th>63</th>
<th>125</th>
<th>250</th>
<th>500</th>
<th>1k</th>
<th>2k</th>
<th>4k</th>
<th>8k</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transmission Loss (dB)</td>
<td>5</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>9</td>
<td>13</td>
<td>14</td>
<td>13</td>
</tr>
<tr>
<td>Acoustic Rating</td>
<td>$R_{10} \text{dB} / D_{16\text{dB}}$</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Acoustic Louvred Doors
- Single and double doors are available in the SL-100 louvre range.
- See page 22 for further details

Weight: 30kg/m²
Module Width: 300 - 1800mm
Standard Module Height: 400mm minimum, (increasing increments of 203mm) Intermediate heights are available

SL-150 Slimshield™ Acoustic Louvres

Aerodynamic Performance

<table>
<thead>
<tr>
<th>Octave Band Centre Frequency (Hz)</th>
<th>63</th>
<th>125</th>
<th>250</th>
<th>500</th>
<th>1k</th>
<th>2k</th>
<th>4k</th>
<th>8k</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transmission Loss (dB)</td>
<td>6</td>
<td>6</td>
<td>8</td>
<td>10</td>
<td>14</td>
<td>18</td>
<td>16</td>
<td>15</td>
</tr>
<tr>
<td>Acoustic Rating</td>
<td>$R_{15} \text{dB} / D_{21\text{dB}}$</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Acoustic Louvred Doors
- Single and double doors are available in the SL-150 louvre range.
- See page 22 for further details

Weight: 30kg/m²
Module Width: 300 - 1800mm
Standard Module Height: 305mm minimum, (increasing increments of 305mm) Intermediate heights are available

---

www.iac-acoustics.com

---

www.iac-acoustics.com
SL-300 Slimshield™ Acoustic Louvres

- **Weight**: 50kg/m²
- **Module Width**: 300 - 1800mm
- **Standard Module Height**: 400mm minimum, (increasing increments of 200mm)
- Intermediate heights are available

**Acoustic Performance**

<table>
<thead>
<tr>
<th>Octave Band Centre Frequency (Hz)</th>
<th>63</th>
<th>125</th>
<th>250</th>
<th>500</th>
<th>1k</th>
<th>2k</th>
<th>4k</th>
<th>8k</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transmission Loss (dB)</td>
<td>6</td>
<td>7</td>
<td>10</td>
<td>12</td>
<td>18</td>
<td>18</td>
<td>16</td>
<td>13</td>
</tr>
<tr>
<td>Acoustic Rating</td>
<td>R₁,₁₇dB / D₁₆,₂₃dB</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Aerodynamic Performance**

<table>
<thead>
<tr>
<th>Static Pressure Drop (N/m²)</th>
<th>10</th>
<th>20</th>
<th>30</th>
<th>40</th>
<th>50</th>
<th>60</th>
<th>70</th>
<th>80</th>
<th>90</th>
<th>100</th>
</tr>
</thead>
<tbody>
<tr>
<td>Face Velocity (m/s)</td>
<td>0.94</td>
<td>1.31</td>
<td>1.61</td>
<td>1.83</td>
<td>2.13</td>
<td>2.27</td>
<td>2.44</td>
<td>2.63</td>
<td>2.84</td>
<td>2.99</td>
</tr>
<tr>
<td>Nominal Free Area</td>
<td>45%*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aerodynamic Coefficient</td>
<td>18.38k</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Acoustic Louvred Doors**

- Single and double doors are available in the SL-300 louvre range.
- See page 22 for further details

---

SL-600 Slimshield™ Acoustic Louvres

- **Weight**: 100kg/m²
- **Module Width**: 300 - 1800mm
- **Standard Module Height**: 400mm minimum, (increasing increments of 200mm)
- Intermediate heights are available

**Acoustic Performance**

<table>
<thead>
<tr>
<th>Octave Band Centre Frequency (Hz)</th>
<th>63</th>
<th>125</th>
<th>250</th>
<th>500</th>
<th>1k</th>
<th>2k</th>
<th>4k</th>
<th>8k</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transmission Loss (dB)</td>
<td>7</td>
<td>9</td>
<td>12</td>
<td>24</td>
<td>31</td>
<td>33</td>
<td>29</td>
<td>30</td>
</tr>
<tr>
<td>Acoustic Rating</td>
<td>R₁,₂₆dB / D₁₆,₃₁dB</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Aerodynamic Performance**

<table>
<thead>
<tr>
<th>Static Pressure Drop (N/m²)</th>
<th>10</th>
<th>20</th>
<th>30</th>
<th>40</th>
<th>50</th>
<th>60</th>
<th>70</th>
<th>80</th>
<th>90</th>
<th>100</th>
</tr>
</thead>
<tbody>
<tr>
<td>Face Velocity (m/s)</td>
<td>0.68</td>
<td>0.94</td>
<td>1.15</td>
<td>1.30</td>
<td>1.47</td>
<td>1.61</td>
<td>1.77</td>
<td>1.89</td>
<td>2.02</td>
<td>2.13</td>
</tr>
<tr>
<td>Nominal Free Area</td>
<td>45%*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aerodynamic Coefficient</td>
<td>38.56k</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

[iacacoustics.com](http://www.iac-acoustics.com)
Acoustic Louvred Doors

- Single and double doors are available in the entire IAC Acoustics louvre range
- The structural minimum is 850mm and is available up to 1250 x 2950mm high as standard for a single door and 2500 x 2950mm high for a double door. Other widths and heights are available on request
- All doors are supplied with a union oval lock, latch and pull handle
- Acoustic louvred doors can be fitted with birdguards and insect meshes on request
- Doors can be polyester powder coated to match adjoining louvres
- Materials for the door and door frame include galvanised steel, stainless steel and aluminium
A Quality Solution
All IAC products are designed to stand the test of time and manufactured to suit the application. From offshore environments to extremes in weather and ambient temperature, IAC Acoustics can produce a highly engineered solution to your noise control issue.

A True World Leader
In addition to providing acoustic louvres, IAC Acoustics is also able to provide the following solutions to noise control:

- Acoustic doors
- Acoustic windows
- HVAC attenuators
- Medical rooms
- Audiology booths
- Acoustic studios
- Acoustic wall treatments
- Anechoic chambers
- Acoustic barriers
- Acoustic enclosures
- Engine exhaust silencers
- Vent silencers
- Aero-engine test facilities
- Jet blast deflectors
- Ground run-up enclosures
- Gas turbine acoustic packages
- Anti-vibration mounts

Our wealth of engineering experience means that custom solutions can also be tailored for specific client applications. Please contact your local IAC Acoustics office should you require a unique solution.

An Engineering Benchmark
IAC products are respected worldwide for their quality and certified performance. Rest assured that IAC Acoustics can deliver a solution to your unwanted noise problem.

Harsh Environments
In addition to providing acoustic louvres located in everyday environments, IAC also has the ability to modify products to suit more demanding applications.
Contacts

For a list of IAC locations worldwide please refer to our website.